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Out[7]: 15

In [9]: *#2 Write a program to create a function show_employee() using the following conditions
#It should accept the employee's name and salary and display both.
#If the salary is missing in the function call then assign default value 9000 to salary*

In [43]:

```
def show_employee(name,salary=9000):  
    print({"name":name, "salary":salary})
```

In [44]:

```
show_employee('ben',10000)  
show_employee('jezz')
```

```
{'name': 'ben', 'salary': 10000}  
{'name': 'jezz', 'salary': 9000}
```

In [45]: *#Exercise 3: Generate a Python List of all the even numbers between 4 to 30*

In [47]:

```
[i for i in range(5,30) if i%2==0]
```

Out[47]: [6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28]

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In [48]: *#Exercise 4: Lambda Function to Check if value is in a List*

In [110]:

```
L=[1,2,3,4,5]  
n=int(input('enter no:'))  
c=lambda i:L.count(i)  
if c(n)==0:  
    print('no')  
else:  
    print('yes')
```

```
enter no:7  
no
```

In [111]: *#Exercise 5: Sort List of tuples with their sum*

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enter no:7
no

In [111]: #Exercise 5: Sort list of tuples with their sum

In [125]: L=[(2,3),(1,2),(3,4),(1,5)]

In [126]: result=sorted(L,key= lambda i:sum(i))

In [127]: result

Out[127]: [(1, 2), (2, 3), (1, 5), (3, 4)]

In [128]: #Exercise 6 :
#Write a python function, which will find all such numbers between 1000 and 3000 (both included)
#such that each digit of the number is an even number.
#Return the results as a list

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#Write a python function that accepts a sentence and calculate and return the number of letters and digits.
#Suppose the following input is supplied to the program:
#Hello world! 123
#Then, the output should be:
#LETTERS 10
#DIGITS 3

In [19]: a='helloworld123'

In [23]: c=[i for i in a if i.isalpha()==True]

In [20]: d=[i for i in a if i.isnumeric()==True]

In [24]: d=''.join(c)

In [22]: print('digits',len(d))

digits 3

In [26]: print('letters',len(c))

letters 10

In [22]: #exercise 8 MAP:

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letters 10

In [22]: *#Exercise 8 MAP:*
#Write a Python program to convert all the characters into uppercase and lowercase and eliminate duplicate Letters from a given string

In [45]:

```
a='helloworld'
b=map(lambda a:a.upper(),a)
c=map(lambda a:a.lower(),a)
d=''.join(set(a))
print(''.join(list(b)))
print(''.join(list(c)))
print(d)
```

HELLOWORLD
helloworld
lwoehrd

In [47]: *#Exercise 9 MAP:*
Write a Python program to add two given Lists and find the difference between them. Use the map() function

In [48]:

```
l1=[1,2,3,4,5]
l2=[4,5,6,7,8]
```

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HELLOWORLD
helloworld
lwoehrd

In [47]: *#Exercise 9 MAP:*
Write a Python program to add two given Lists and find the difference between them. Use the map() function

In [48]:

```
l1=[1,2,3,4,5]
l2=[4,5,6,7,8]
```

In [50]:

```
a=map(lambda x,y:x+y,l1,l2)
b=map(lambda x,y:x-y,l1,l2)
print(list(a))
print(list(b))
```

[5, 7, 9, 11, 13]
[-3, -3, -3, -3, -3]

In [51]: *#Exercise 10 Filter:*
#Write a Python program to filter the height and weight of students, which are stored in a dictionary using Lambda.
#Original Dictionary:
#3cHeight> 6ft and Weight> 70kg:

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[-3, -3, -3, -3, -3]

In [51]: #Exercise 10 Filter:
#Write a Python program to filter the height and weight of students, which are stored in a dictionary using Lambda.
#Original Dictionary:
#3cHeight> 6ft and Weight> 70kg:

In [90]: #11. Write a Python program to remove all elements from a given List present in another List using Lambda.
#Original Lists:

#####

In [91]: a=[1,2,3,4,5,6]
b=[2,3,4]

In [100]: c=filter(lambda x:x not in b,a)

In [101]: 1 print(list(c))

[1, 5, 6]

In [16]: #Exercise 12 Reduce:

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In [107]: from functools import reduce

In [110]: list=[1,2,3,4,5,6,7,8,9,10]
c=reduce(lambda x,y:x*y,list)

In [112]: c

Out[112]: 3628800

In [15]: #Exercise 13 Reduce:

#Write a Python program to multiply all the numbers in a given list using Lambda.
#Original List:
#[4, 3, 2, 2, -1, 18]

In [114]: list=[4,3,2,2,-1,18]
c=reduce(lambda x,y:x*y,list)

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In [138]: `l=((10, 10, 10), (30, 45, 56), (81, 80, 39), (1, 2, 3))`

In [14]: `#Exercise 15:`
`#Write a Python program to sort a given mixed List of integers and strings using Lambda. Numbers must be sorted before strings.`
`#Original List:`
`#[19, 'red', 12, 'green', 'blue', 10, 'white', 'green', 1]`

In [156]: `list=[19, 'red', 12, 'green', 'blue', 10, 'white', 'green', 1]`

In [159]: `c=sorted(list,key=lambda x:(isinstance(x,str),x))`

In [160]: `print(c)`
`[1, 10, 12, 19, 'blue', 'green', 'green', 'red', 'white']`

In [12]: `#Exercise 16:`
`#Write a Python program to count the occurrences of items in a given List using Lambda.`

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In [160]: `print(c)`
`[1, 10, 12, 19, 'blue', 'green', 'green', 'red', 'white']`

In [12]: `#Exercise 16:`
`#Write a Python program to count the occurrences of items in a given List using Lambda.`

In [167]: `b=[3, 4, 5, 8, 0, 3, 8, 5, 0, 3, 1, 5, 2, 3, 4, 2]`

In [176]: `c=dict(map(lambda x:(x,b.count(x)),b))`

In [177]: `c`

Out[177]: `{3: 4, 4: 2, 5: 3, 8: 2, 0: 2, 1: 1, 2: 2}`

In [11]: `#Exercise 17:`
`#Write a Python program to remove None values from a given List using the Lambda function.`
`#Original List:`
`#[12, 0, None, 23, None, 55, 234, 88, None, 0, 6, 121]`

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In [177]: c

Out[177]: {3: 4, 4: 2, 5: 3, 8: 2, 0: 2, 1: 1, 2: 2}

In [11]: #Exercise 17:

#Write a Python program to remove None values from a given List using the lambda function.
#Original List:
#[12, 0, None, 23, None, -55, 234, 89, None, 0, 6, -12]

In [5]: l=[12, 0, None, 23, None, -55, 234, 89, None, 0, 6, -12]

In [9]: c=filter(lambda x: x is not None,l)

In [10]: list(c)

Out[10]: [12, 0, 23, -55, 234, 89, 0, 6, -12]

In []:

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UPDATE Read the [migration plan](#) to Notebook 7 to learn about the new features and the actions you can take to migrate your extensions.

for i in range(1,30): if(i%7==0):

Notebook 7 might break some of your extensions. Don't show anymore

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In [29]: a=3.7

In [31]: b=str(a).split('.')

In [32]: b

Out[32]: ['3', '7']

In [42]: if len(b)==2:
print("decimal")

decimal

In [46]: if b[1]==0:
print('integer')
else:
print('its a decimal')
print(b[1],'is decimal')

its a decimal
7 is decimal

In []:

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Out[105]: -004

In [186]:

In [1]: #1.inner function to calculate addition

In [5]:

```
def test1(a,b):  
    def add(a,b):  
        print(a+b)  
    return(a+b*5)
```

In [7]: test1(5,3)

Out[7]: 13

In [9]: #2 Write a program to create a function show_employee() using the following conditions
#It should accept the employee's name and salary and display both.
#If the salary is missing in the function call then assign default value 9000 to salary

In [43]: def show_employee(name,salary=9000):
print({"name":name, "salary":salary})

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